

REMARKS/ARGUMENTS

The Applicants appreciate the Examiner's careful consideration of the present Application. In the Office Action, claims 13, 17 and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by either Kollock (U.S. Patent No. 5,927,242) or Japanese patent publication no. 60-139994 (hereinafter, "the Japanese reference"). Additionally, claims 14 and 15 were rejected under 35 U.S.C. §103(a) as being obvious in view of the Japanese reference.

The Applicants appreciate the Examiner's indication that claims 1-12 are allowable and further that claims 16, 19 and 20 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicants have made a minor amendment to claim 1. This amendment does not add new matter and is not being made for reasons substantially related to the patentability of the claim, but rather is being made in order to render the claim language more consistent with that of claim 10. Also, the Applicants have added a new claim 21, which does not add new matter.

In response to the Office Action, the Applicants have amended independent claims 13 and 17 as well as dependent claims 14-16 and 18-20. In view of these amendments, the Applicants respectfully submit that all of claims 1-20 are allowable under both 35 U.S.C. §102(b) and 35 U.S.C. §103(a), for at least the reasons set forth below.

Amendments to, and Allowability of, Claims 13-16

With respect to independent claim 13, this claim has been amended to recite "a protrusion that extends outward away from the weight in a direction that is substantially parallel to a central axis of the crankshaft and is at least one of coupled to the weight and integrally formed as part of the weight", the protrusion being guided along a path by a structure as the weight moves. Claims 14-16 additionally have been amended to conform to the claim 13 amendments. The Applicants respectfully submit that none of these amendments adds new matter to the present Application and, with respect to the

amendments to claims 14-16, that none of these amendments are being made for reasons substantially related to the patentability of these claims.

In view of these amendments, the Applicants respectfully submit that claims 13-16 are now in condition for allowance over Kollock and the Japanese reference, both under 35 U.S.C. 102(b) and 35 U.S.C. 103(a). Specifically with reference to Kollock, the embodiment of Figs. 6-8 of that patent shows convex bearing surfaces that extend outward away from the balance weight 120 in a manner that is perpendicular to the crankshaft axis. Additionally, the embodiment of Figs. 9-11 of Kollock only shows a guide pin that is coupled to the crankcase rather than the weight. Likewise, with respect to the Japanese reference, that reference only discloses a pin 31 that is coupled to the crankcase rather than the weight. Consequently, each of Kollock and the Japanese reference apparently fails to disclose any embodiment in which a protrusion that is coupled to the weight extends outward from the weight in a direction that is substantially parallel to the crankshaft axis.

The Applicants further submit that they are unable to find any suggestion within Kollock and the Japanese reference to modify and/or combine their teachings so as to arrive at the Applicants' claim 13 invention. Indeed, the embodiments shown in these references are quite different from the Applicants' claim 13 invention, since they operate in significantly different manners. For example, the motions experienced by the weights in the embodiment of the Japanese reference and that shown in Figs. 9-11 of Kollock are significantly different from that of the Applicants' invention.

For at least these reasons, therefore, the Applicants submit that claims 13-16, as amended, are allowable over both Kollock and the Japanese reference, under 35 U.S.C. 102(b) and 35 U.S.C. 103(a).

Amendments to, and Allowability of, Claims 17-20

With respect to independent claim 17, that claim has been amended to provide that the path along which the counterbalance assembly is guided is "determined by an interaction between a pin and a groove", and that a "counterbalancing mass portion" of the counterbalance assembly rotates along a moving axis. Additionally, claims 18-20 have been amended slightly to conform those claims to the amendments in claim 17. None of these amendments adds new matter and, with respect to claims 18-20, the

Applicants submit that these amendments are not being made for reasons substantially related to the patentability of the claims.

In view of these amendments to claims 17-19, the Applicants respectfully submit that claims 17-20 are allowable over both Kollock and the Japanese reference, under 35 U.S.C. 102(b) and 35 U.S.C. 103(a). Neither of these references, alone or in combination, shows an embodiment with all of the features recited in amended claim 17, nor are the Applicants able to find any suggestion within these references to modify and/or combine the references to arrive at the Applicants' claim 17 invention.

With respect to Kollock, amended claim 17 now recites that a counterbalancing mass portion rotates along a moving axis and that the path of the counterbalance assembly is determined by an interaction between a pin and a groove. Kollock does not appear to show an embodiment that includes both of these features. In particular, the embodiment shown in Figs. 7-8 of Kollock lacks a pin and a groove for determining a path of a counterbalance assembly. Additionally, the embodiment shown in Figs. 9-11 of Kollock lack a counterbalancing weight that rotates, since the balance weight 152 does not rotate but rather maintains its rotational orientation as it moves toward and away from the crankshaft.

As for the Japanese reference, the Applicant submit that this reference fails to show a counterbalancing mass portion that rotates about a moving axis. The pin 31 shown in the Japanese reference provides a fixed, rather than moving, axis.

For at least these reasons, therefore, the Applicants submit that claims 17-20, as amended, are allowable over both Kollock and the Japanese reference, under 35 U.S.C. 102(b) and 35 U.S.C. 103(a).

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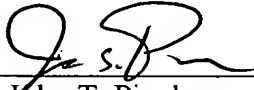
Conclusion

Given the Applicants' Remarks and Amendments, the Applicants respectfully request reconsideration and allowance of the present Application.

The Applicants wish to invite the Examiner to telephone the Applicants' attorney at the number listed below if discussion with the Applicants' attorney would be of assistance to the Examiner or further the prosecution of the present Application.

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Respectfully submitted,
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